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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,792	01/18/2002	Steven A. Thiel	10541/1074	7451

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EXAMINER

KILKENNY, TODD J

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 07/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/055,792	THIEL ET AL.
Examiner	Art Unit	
Todd J. Kilkenny	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-12 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 15 April 2002 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5,6</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4, 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art (Specification, Page 1, lines 15 – 18) in view of Balzer et al (US 20002/0053568) and Ruediger (DE 19912642).

The admitted prior art discloses; “it is known to produce a fuel tank shell from plastic using a thermoforming process. Moreover, it is known to assemble a fuel tank shell from two thermoformed half shell portions sealingly assembled together by means of a continuous weld seam.” (Specification, page 1, lines 8 – 21) However, the admitted prior art process suggests installing the fuel delivery module, including a reservoir assembly, by inserting it into the fuel tank through an opening in the fuel tank shell after the fuel tank shell is sealingly assembled. That is, the admitted prior art process fails to suggest providing a reservoir assembly and fixing said reservoir assembly to one of the shell portions and thereafter sealingly connecting the shell portions to form a fuel tank that encloses the reservoir assembly within said fuel tank.

Balzer et al disclose a double-wall fuel container composed of at least first and second elements in shell form, which are joined together by joining of the respective materials thereof. As diagrammed in Fig. 2, a surge or swirl pot (15) forming a fuel

reservoir for a fuel pump is provided within the fuel container, wherein "the surge or swirl pot (15) can be joined to the inside wall (6) of the container in a positively locking relationship or by joining of the materials involved, prior to the shell portions (2a, 2b) being fitted together." (Paragraph 0044).

Ruediger teaches a fuel tank containing a reservoir that is accessible from a lock-up opening in the wall of the fuel tank and discloses the aim of the invention is to choose the size of the reservoir independently from the size of the opening (English Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to fix the reservoir assembly of the admitted prior art process to one of the first and second thermoformed shell portions and thereafter sealingly connect the shell portions to form a fuel tank to enclose the reservoir within said tank as is suggested by Blazer et al, wherein one of ordinary skill would have been motivated to install the fuel reservoir within the fuel tank in this manner so as to have the ability to choose the size of the reservoir independently from the size of the opening in the fuel tank as is an advantage as disclosed by Ruediger.

3. Claims 2, 3, 7, 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (Specification, Page 1, lines 15 – 18) in view of Balzer et al (US 20002/0053568) and Ruediger (DE 19912642) as applied to claims 1, 6 and 9, and further in view of Vorenkamp et al (US 2002/0020487) and/or Sasaki et al (US 5,044,526).

In fixing the reservoir to the tank shell, Balzer et al suggest joining the surge or swirl pot to the inside wall of the container in a positively locking relationship or by joining the materials involved.

Vorenkamp et al teach an adapter for welding objects to plastic including fuel system components installed inside a plastic fuel tank by fixedly mounting said components to the interior walls of the fuel tank. Mounting an object (e.g. fuel system component) includes an adapter, which is capable of absorbing stresses, wherein the adapter is welded to the surface of the plastic tank and comprises a body, a coupling mechanism and at least two feet (paragraphs [0015] and [0016]).

Sasaki et al teach a fuel pump and reservoir arrangement for use in a fuel tank wherein a bracket is permanently fixed to a lower wall of a fuel tank so as to provide an adaptor for the reservoir connection (Col. 1, line 60 – Col. 2, line 64).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ an adapter in joining the fuel reservoir to a fuel tank shell as disclosed in the references as combined against claims 1, 6 and 9 as is disclosed by Vorenkamp et al and/or Sasaki et al so as to provide stress absorbing means between the tank and reservoir for better protection.

4. Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (Specification, Page 1, lines 15 – 18) in view of Balzer et al (US 20002/0053568) and Ruediger (DE 19912642) as applied to claim 1 above, and further in view of Beyer et al (US 2002/0053567) and/or Stangier (US 6,332,555).

None of the admitted prior art, Balzer et al, or Ruediger appears to disclose flange means removably secured to the fuel tank access aperture.

Beyer et al teach an in-tank fuel line quick connector assembly, which referring to Fig. 1, includes a removable tank cover (24; "flange assembly") disposed in the opening (20) of the tank (12) and sealed to the top wall (18).

Stangier teach a removable holding cover ("flange assembly") for a fuel tank opening wherein referring to Fig.1, said cover is partially disposed within said fuel tank opening and secured thereto via a clamping ring (20).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include a removable cover to the fuel tank opening of the references as combined in the rejection against independents claims 1 and 9, wherein such a connection provides a covering for the fuel tank opening that remains operative over a prolonged period of time, while on the other hand, for example in the event of repair, can be quickly released and restored (Stangier; Col. 5, lines 35 – 41).

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (Specification, Page 1, lines 8 – 14) in view of Balzer et al (US 20002/0053568) and Ruediger (DE 19912642) as applied to claim 9 above, and further in view of Mukaidani et al (US 5,992,394) and Hahner et al (US 6,176,260).

The references as combined against claim 9 disclose a non-integral reservoir assembly having its smallest cross-sectional area being greater than the area of a fuel tank access aperture in a thermoformed fuel tank shell. The references as combined

further suggest that the reservoir can contain a fuel delivery module, including a fuel pump for pumping fuel out of the fuel tank and an auxiliary pump provided to keep the reservoir full by pumping fuel from the fuel tank into the reservoir (Admitted Prior Art, Specification, page 1 lines 8 – 14), but the references fail to suggest the reservoir to include a fuel filter assembly, a fuel pressure regulator assembly and a level sensor assembly mounted to said reservoir.

Mukaidani et al teach a fuel supply device for an engine has a pump module comprising a fuel pump (21) and a fuel filter (22) housed with a sub-tank (30; “reservoir”) mounted in a fuel tank. The sub-tank also accommodates therein a fuel level gauge (41), and a jet pump (40; “auxiliary pump”) and appears to have a reservoir cover (Fig. 2, unlabeled).

Hahner et al teach a fuel tank with incorporated deformable reservoir whereby included in the reservoir is a pressure regulator (Col. 5, line 50 – Col. 6, line 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include within the fuel reservoir of the references as combined a fuel pump, a fuel filter, a fuel level gauge, an auxiliary pump and a pressure regulator, as such are conventional components of fuel delivery modules that are known to be positioned within reservoirs as evidenced by Mukaidani et al and Hahner et al and only the expected fuel tank would be formed. Furthermore, it would have been obvious to include a reservoir cover to said reservoir as is well known in the art as evidenced for example by Mukaidani et al, so as to further define and protect the level of fuel within the reservoir.

As the reference to Balzer et al is art available under 102(e), the claims are additionally rejected to Jacobson et al as provided below.

6. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al (US 5,129,544) in view of the Admitted Prior Art (Specification, page 1, lines 8 – 21).

Jacobson et al teach a laminated fuel tank structure including first and second housing parts sealingly secured together. Referring to Figs. 1 and 2, Jacobson et al disclose, “prior to joining the housing flanges together, one or more additional structures (26) can be positioned within the housing chamber (24) prior to assembling the housing parts (12 and 14) together.” The additional structures are disclosed to include reservoirs (Col. 3, lines 46 – 60). One of ordinary skill in the art at the time of the invention would have readily appreciated in view of Jacobson et al’s disclosure to position said reservoir in one housing part before the other housing part is secured thereto would have entailed fixing said reservoir to said first or second housing part. In any event, it would have been obvious to one of ordinary skill in the art at the time of the invention to fix the reservoir assembly in view of Jacobson et al’s disclosure to position said reservoir in one housing part before the other housing part is secured thereto, wherein “fixing” is conventionally required to permanent position a fuel reservoir within a fuel tank as is considered to be well known, i.e. Official Notice is taken, in the art.

Jacobson et al further teach employing conventional stamping methods to shape laminate sheets into the first and second housing parts or other forming methods, such as vacuum forming, failing to positively recite thermoforming. However, as evidenced

by applicant's own admission, it is known to produce fuel tank shells from plastic using a thermoforming process (specification, page 1, lines 15 – 16). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to thermoform the plastic laminates of Jacobson in forming the first and second housing members, in view of Jacobson suggesting "other forming methods", wherein thermoforming is a known other method to employ produce fuel tank housing from plastic as evidenced by the admitted prior art.

7. Claims 2, 3, 7, 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al in view of Admitted Prior Art (specification, page 1, lines 8 – 21) as applied to claims 1, 6 and 9 above, and further in view of Vorenkamp et al (US 2002/0020487) and/or Sasaki et al (US 5,044,526).

In fixing the reservoir to the tank shell, Balzer et al suggest joining the surge or swirl pot to the inside wall of the container in a positively locking relationship or by joining the materials involved.

Vorenkamp et al teach an adapter for welding objects to plastic including fuel system components installed inside a plastic fuel tank by fixedly mounting said components to the interior walls of the fuel tank. Mounting an object (e.g. fuel system component) includes an adapter, which is capable of absorbing stresses, wherein the adapter is welded to the surface of the plastic tank and comprises a body, a coupling mechanism and at least two feet (paragraphs [0015] and [0016]).

Sasaki et al teach a fuel pump and reservoir arrangement for use in a fuel tank

wherein a bracket is permanently fixed to a lower wall of a fuel tank so as to provide an adaptor for the reservoir connection (Col. 1, line 60 – Col. 2, line 64).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ an adapter in positioning a fuel reservoir in the fuel tank housing part of Jacobson et al as is disclosed by Vorenkamp et al and/or Sasaki et al, so as to provide stress absorbing means between the tank and reservoir for better protection.

8. Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al in view of Admitted Prior Art (specification, page 1, lines 8 – 21) as applied to claim 1 above, and further in view of Beyer et al (US 2002/0053567) and/or Stangier (US 6,332,555).

Neither Jacobson et al nor the admitted prior art appear to disclose flange means removably secured to the fuel tank access aperture.

Beyer et al teach an in-tank fuel line quick connector assembly, which referring to Fig. 1, includes a removable tank cover (24; “flange assembly”) disposed in the opening (20) of the tank (12) and sealed to the top wall (18).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to include a removable cover to the fuel tank opening to the fuel tank of the

references as combined, wherein such a connection provides a covering for the fuel tank opening that remains operative over a prolonged period of time, while on the other hand, for example in the event of repair, can be quickly released and restored (Stangier; Col. 5, lines 35 – 41).

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include a reservoir cover to said reservoir as is well known in the art as evidenced for example by Mukaidani et al, so as to further define and protect the level of fuel within the reservoir.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Todd J. Kilkenny** whose telephone number is **(703) 305-6386**. The examiner can normally be reached on Mon - Fri (9 - 5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

TJK
June 27, 2003

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June 27, 2003

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